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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

COUNTRY : GERMANY (Soviet Zone)

DATE DISTR. 14 APRIL 52

25X1

SUBJECT : Information on Leuna Projects

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THIS IS UNEVALUATED INFORMATION

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1.

(a) One project worked out by the KIB (Konstruktions Ingenieurs Büro) was a plan for isobutyl fractionation, and a copy of the KIB flow sheet, dated 9 Sep 46, for this fractionation process. See Enclosure (A) The isobutyl fraction is sometimes referred to as "isobutyl oil"; this fraction, containing higher alcohols, is obtained in the synthesis of methyl alcohol from carbon monoxide and hydrogen. This project indicates that the Soviets are interested in the production of higher alcohols

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(b) The Soviets were particularly interested in K-glue, also called Kaurit, which is a urea-formaldehyde resin. They shipped about 15-25 tons per month from Leuna to their own economy.

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The urea plant was not installed in September 1950, but

it is now in

operation. it is made of ordinary steel, and considerable difficulty has been experienced with corrosion. There was always a large supply of urea stored at Leuna; it had been produced at Ludwigshafen.

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25 YEAR RE-REVIEW

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Insecticides are produced, particularly a powder for use against lice; it was called "Sarnex".

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8.

Dr. Gehricke and Dr Zorn developed oils for aircraft engines. These oils were esters of higher alcohols with adipic acid. They were produced during the war and showed very little change with use, and had a low viscosity number, about 140.

9.

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at Leuna, Perlon was not being produced. The Research and Organic Laboratories were working on the development of Perlon thread, but they had not mastered the process by September 1950. Dr. Koethnig of the Research Laboratory had worked out a new method for caprolactam which he kept a very close secret. Dr Fritsche and Dr Deiters, both capable scientists, were also working in the caprolactam field. As for the production of caprolactam, phenol is hydrogenated over a catalyst at 120° C and 150 atmospheres to form cyclohexanol. This is then oxidized by a method unknown to me to produce cyclohexanone, which is treated with hydroxylamine sulfate to give the oxime. This is then treated with sulfuric acid and rearranged to give caprolactam. The production of caprolactam was about 40 tons per month, and almost all of this was taken by the Soviets.

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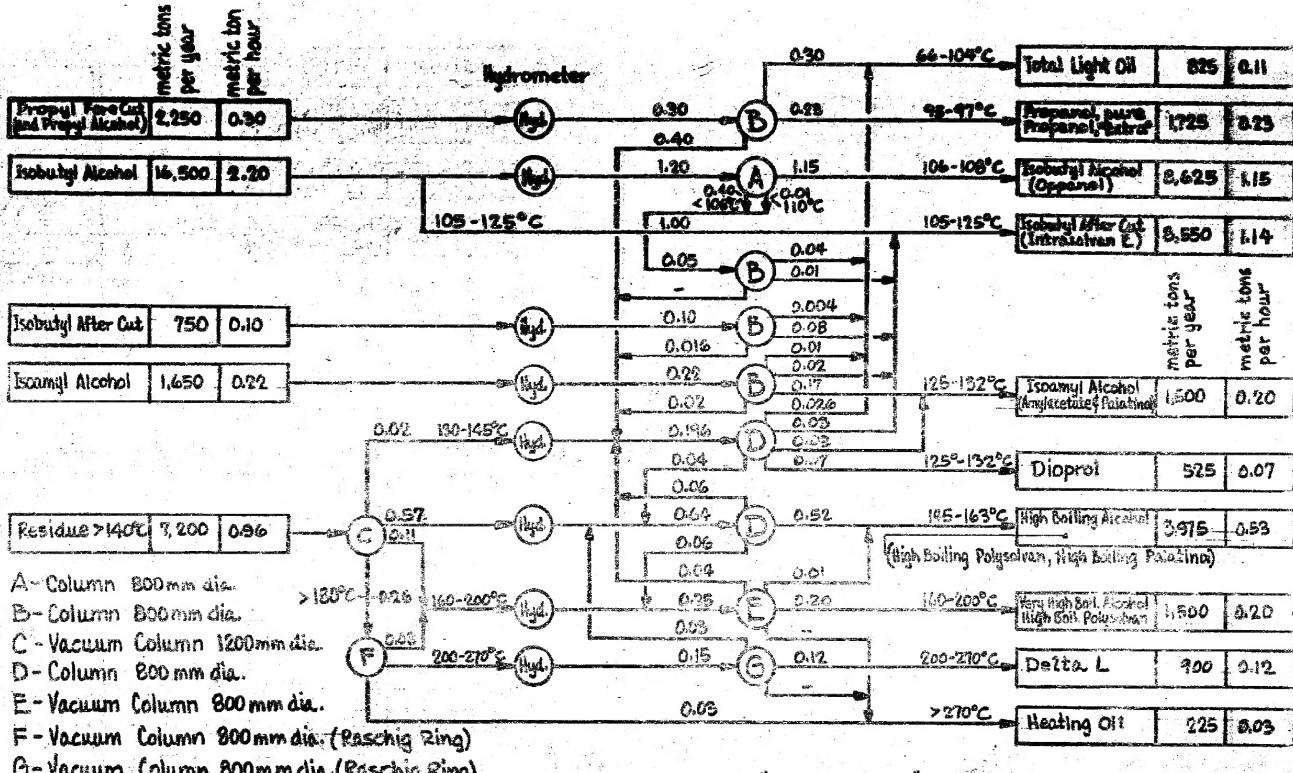
10.

There was very little research going on in the Organic Department at Leuna in the years 1945-50. The project that the Soviets were most interested in was the development of caprolactam, and on that project was expended the greatest amount of energy. The Soviets also showed interest in the development of urea production, because they needed the urea to make glue for laminated wood production. They also needed urea for the spongy resin, Iporka, used for insulating railway cars, especially refrigerator cars. 2-A oil made at Leuna is a mixture of SS906 oil and spindle oil. The SS906 oil is made by Dr Munzing in the Organic Laboratory. It is obtained by the polymerization of ethylene under pressure with aluminum chloride and then perhaps condensing with higher alcohols. The 2-A oil is a turbine oil for local Soviet Zone consumption and was not Soviet-inspired. It was developed because all available turbine oils were of inferior quality. At 50° C, it had a viscosity of 6-7 in an Engler viscosimeter.

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ENCLOSURE (A) Plan for Isobutyl Fractionation
(Flow Sheet)

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Scheme of "ISOBUTYL" Fractionation - KIB 9 Sept. 76